

REMARKS / DISCUSSION OF ISSUES

In the non-final Office action dated May 27, 2009, it is noted that claims 1-8 are pending and that all claims stand rejected under either 35 U.S.C. § 101 and 35 U.S.C. § 103. Claim 9 was previously cancelled. Claims 1, 3, 4, and 6 are amended to clarify certain aspects of the invention. Support for the amendments can be found at least at page 4, lines 21-22 of Applicants' specification as originally filed. No new matter is added.

35 U.S.C. § 101

Claims 3, 4, and 6 stand rejected under 35 U.S.C. § 101 as allegedly not falling within one of the four statutory categories of invention. Applicants respectfully traverse these rejections.

"A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing." *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008, Cert. granted) (en banc).

Claims 3, 4, and 6 recite the feature of "in a transmission system." Support for this amendment is located at least at page 1, lines 1-6 of the specification as originally filed. No new matter has been added.

Applicants respectfully submit that claims 3, 4, and 6 are tied to a particular machine or apparatus, the machine or apparatus being a transmission system. Therefore, claims 3, 4, and 6 are directed to statutory subject matter. As such, Applicants respectfully request the withdrawal of the rejection to claims 3, 4, and 6 under 35 U.S.C. § 101.

Cited Art

The art cited and applied in the present Office action includes: The background of Applicants' specification (hereinafter referenced as the "background"), Great Britain Patent Application GB 2 331 207 to Park (hereinafter referenced as "Park"), U.S. Patent Publication 2003/0108089 to Lee et al. (hereinafter "Lee"), U.S.

Patent 5,394,433 to Bantz et al. ("Bantz"), and U.S. Patent 5,204,874 to Falconer et al. ("Falconer").

35 U.S.C. § 103(a)

Claims 1, 2, and 5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Park in view of Lee. Claim 3 is rejected over Falconer in view of the background. Claims 4, 6, and 8 over Bantz in view of Falconer. Claim 7 over Bantz and Falconer in view of Park. Applicants respectfully traverse these rejections.

In re Wada and Murphy, Appeal 2007-3733, the BPAI stated that:

When determining whether a claim is obvious, an examiner must make "a searching comparison of the claimed invention – *including all its limitations* – with the teaching of the prior art." *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). Thus, "obviousness requires a suggestion of all limitations in a claim." *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)). Moreover, as the Supreme Court recently stated, "*there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.*" *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (emphasis added)).

Applicants' claim 1 recites, in part:

assigning different spreading codes ($g_1^{(k)}$, $g_2^{(k)}$... $g_H^{(k)}$) from a defined set (G_i), wherein the spreading codes are produced decentrally. Emphasis added.

The Office action at page 4 admits that Park fails to teach assigning different spreading codes from a defined set and allocation of a sequence for the application of the different spreading codes and/or a hop interval. The Office action alleges that Lee at paragraphs [0031] and [0036] teaches assigning different spreading codes from a defined set and allocation of a sequence for the application of the different spreading codes. However, Applicants respectfully submit that Lee does not disclose assigning different spreading codes ($g_1^{(k)}$, $g_2^{(k)}$... $g_H^{(k)}$) from a defined set (G_i), wherein the spreading codes are produced decentrally, as required by Applicants' claim 1.

Lee at paragraphs [0031] and [0036] apparently discloses that each user is assigned orthogonal codes from a set of mutually orthogonal codes (e.g., Walsh codes) during the setup of a call. As of the filing date of this application, Walsh codes were commonly known orthogonal codes used to uniquely define individual communication channels. As disclosed at least within the background section at page 3, lines 32-33 of Applicants' specification and at Falconer at column 21, line 68-column 22, line 4, Walsh codes are output from a centralized encoding portion of the communication system, and as such, the allocation of the Walsh codes takes place in a centralized and coordinated manner. This disclosure of Lee and the background is completely different from the Applicants' claimed invention.

Although Lee may disclose that each user may be assigned Walsh codes, Lee does not disclose assigning different spreading codes from a defined set, wherein the spreading codes are produced decentrally. As pointed out above, Walsh codes in Lee are produced in a centralized and coordinated manner. This is completely different from Applicants' claim 1, which requires that the spreading codes are produced decentrally. Nowhere does Lee disclose, teach, or even suggest that the spreading codes are produced decentrally. Therefore, Park and Lee, separately or in combination, fails to disclose, teach, or even suggest the features of claim 1 as pointed out above. Therefore, for at least the above reasons, claim 1 is patentable over the combination of Park and Lee.

Independent claims 3, 4, and 6, although different from claim 1, include several similar distinguishing features as discussed above with respect to claim 1. For example, claim 3 is directed to a method for encrypting a digital data stream that is to be transmitted in a transmission system, claim 4 is directed to a method for encrypting a digital data stream in a transmission system, the method comprising executing a first permutation procedure which contains a loop, and claim 6 is directed to a method for decoding a received digital data stream that was sent encrypted in a transmission system, the method comprising executing a second permutation procedure that contains a loop.

The Office action uses substantially the same arguments as set forth with regard to claim 1, alleging that independent claim 3 is rejected over Falconer in view of the Applicants' background, and claims 4 and 6 are rejected over Bantz in view of Falconer. Applicants essentially repeat the above arguments for claim 1 and apply them to independent claims 3, 4, and 6. As such, Applicants respectfully submit that claims 3, 4, and 6 are allowable over the combination of cited art and requests the withdrawal of the rejection of independent claims 3, 4, and 6 under 35 U.S.C. 103(a).

With respect to the remaining dependent claims, the Office Action cites additional references as noted above. However, each of dependent claims 2, 5, 7, and 8 depends upon an allowable independent base claim and inherits all of the features of the respective independent base claim. The cited references do not cure the deficiencies as noted as applied to the respective independent claim. Thus, each dependent claim is patentable for at least the same reasons discussed above with respect to its independent base claim, upon which it depends, with each dependent claim containing further distinguishing patentable features.

It is respectfully submitted that the rejections of claims 1-8 have been overcome. Hence, withdrawal of the rejections and early allowance of the claims are respectfully requested.

Conclusion

An earnest effort has been made to be fully responsive to the Examiner's correspondence and advance the prosecution of this case. In view of the foregoing, it is respectfully submitted that all the claims pending in this patent application are in condition for allowance.

If there are any errors with respect to the fees for this response or any other papers related to this response, the Director is hereby given permission to charge any shortages and credit any overcharges of any fees required for this submission to Deposit Account No. 14-1270.

Respectfully submitted,

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